AMENDMENTS TO THE CLAIMS

1. **(ORIGINAL)** A method of producing decorative panels using a computer-driven machining tool having a tool bed and a cutting head, the method comprising:
   a. affixing a board formed of machinable material to the tool bed, the board having:
      (1) an X width dimension bounded by opposing right and left surfaces, and
      (2) a Y height dimension bounded by opposing top and bottom surfaces,
      (3) a Z depth dimension bounded by opposing front and rear surfaces;
   b. providing a mathematical formula which defines a surface in the XYZ domain, the surface having a Z depth which varies across the XY plane;
   c. driving at least one of the cutting head and tool bed to cut the front surface of the board in accordance with at least a portion of the defined surface; and
   d. installing the rear surface of the board on a wall.

2. **(ORIGINAL)** The method of claim 1:
   a. further comprising the step of generating a pointset from the mathematical formula, the pointset having:
      (1) spaced points distributed across the X width and Y height dimensions of the board, and
      (2) the corresponding Z depths being defined by the mathematical formula;
   b. wherein the step of driving at least one of the cutting head and tool bed to cut the front surface of the board is performed by driving between the spaced points.

3. **(ORIGINAL)** The method of claim 2 wherein at least one of the cutting head and tool bed is driven nonlinearly from each of the spaced points to the next to cut the front surface of the board.

4. **(ORIGINAL)** The method of claim 2 wherein at least one of the cutting head and tool bed is driven in an arcuate path from each of the spaced points to the next to cut the front surface of the board.

5. **(ORIGINAL)** The method of claim 2 wherein the step of driving at least one of the cutting head and tool bed to cut the front surface of the board includes the substeps of:

   a. selecting a first subset of the points in the generated pointset; and

   b. driving between the spaced points in the first subset.

6. **(ORIGINAL)** The method of claim 5 further comprising the step of cutting a second board by driving at least one of the cutting head and tool about the second board between at least some of the spaced points in the generated pointset which are not included in the first subset.

7. **(ORIGINAL)** The method of claim 5 further comprising the step of cutting a second board by:

   a. selecting a second subset of the points in the generated pointset, the second subset including points excluded from the first subset; and

   b. driving between the points in the second subset.

8. **(ORIGINAL)** The method of claim 1:

   wherein for each Y value of the height between the top and bottom surfaces, the mathematical formula defines the same Z depth values on the right and left surfaces; whereby a pair of boards cut in accordance with claim 1, and placed in abutment so that the right side of one board meets the left side of the other board, will have continuous Z depth across their adjoined sides.

9. **(ORIGINAL)** The method of claim 1 further comprising the step of treating the cut front surface of the board with at least one of:

a. a protective coating; and

b. a decorative coating.

10. **(ORIGINAL)** The method of claim 1 wherein the mathematical formula includes one or more of:

a. a trigonometric function;

b. a polynomial function; and

c. a random number generator.

11. **(ORIGINAL)** A method of producing decorative panels using a computer-driven machining tool having a tool bed and a cutting head, the method comprising:

a. affixing a board formed of machinable material to the tool bed, the board having:

(1) a rear surface, and

(2) an opposing front surface with an X width dimension, a Y height dimension, and a Z depth dimension;

b. providing a mathematical formula which defines a surface in the XYZ domain, the surface having a nonuniform Z depth across the XY plane;

c. generating a first pointset from the mathematical formula, the first pointset having:

(1) spaced X and Y point pairs distributed across the X width and Y height dimensions of the board, and

(2) corresponding Z depths defined by the mathematical formula in accordance with the X and Y point pairs;

d. driving at least one of the cutting head and tool bed to move the cutting head along the front surface of the board between the spaced points in the first pointset, thereby machining the board to have a front surface substantially corresponding to the surface defined by the mathematical formula.

12. **(ORIGINAL)** The method of claim 11 wherein at least one of the cutting head and tool bed is driven nonlinearly from each of the spaced points to the next to cut the front surface of the board.

13. **(ORIGINAL)** The method of claim 11 further comprising the step of cutting a second board by:

    a. generating a second pointset from the mathematical formula, the second pointset including X and Y point pairs excluded from the first pointset; and

    b. driving between the points in the second pointset.

14. **(ORIGINAL)** The method of claim 11:

    wherein for each Y value along the height of the board, the mathematical formula defines the same Z depth values on the boundaries of the width of the board, whereby a pair of boards cut in accordance with claim 11, and placed in abutment with their widths situated side by side, will have continuous Z depth across their adjoined sides.

15. **(ORIGINAL)** The method of claim 11 further comprising installing the rear surface of the board on a wall.

16. **(ORIGINAL)** The method of claim 11 further comprising the step of treating the cut front surface of the board with at least one of:

    a. a protective coating; and

    b. a decorative coating.

17. **(ORIGINAL)** A method of producing decorative panels using a computer-driven machining tool having a tool bed and a cutting head, the method comprising:

a. providing a mathematical formula which defines a surface in the XYZ domain, the surface having a varying Z depth across the XY plane;

b. generating two or more board pointsets from the mathematical formula, each board pointset having:

(1) spaced X and Y point pairs distributed across the X width and Y height dimensions of the board, and

(2) Z depths defined by the mathematical formula in accordance with the X and Y point pairs,

and wherein the board pointsets have little or no overlap in X and Y point pairs;

c. machining two or more boards, each board having:

(1) a rear surface, and

(2) an opposing front surface with an X width dimension, a Y height dimension, and a Z depth dimension,

wherein each board is machined by moving the cutting head relative to the front surface of the board in accordance with a respective one of the board pointsets.

18. **(ORIGINAL)** The method of claim 17:

wherein each of the generated board pointsets has a boundary with X and Y point pairs situated adjacent the X and Y point pairs in the boundary of another one of the generated board pointsets,

whereby the machined boards, if situated with their boundaries in abutment, have the same Z depth at their adjoined boundaries.

19. **(ORIGINAL)** The method of claim 17 further comprising installing the rear surfaces of the boards on a wall, with the boards having boundaries situated in abutment.

20. **(ORIGINAL)** The method of claim 17 further comprising the step of treating the cut front surfaces of the boards with at least one of:

a. a protective coating; and

b. a decorative coating.

21. **(NEW)** The method of claim 1 wherein:

a. the mathematical formula is defined across at least the entireties of the X width and Y height dimensions of the board; and

b. the rear surface of the board is installed on the wall of a building.

22. **(NEW)** The method of claim 11 wherein the mathematical formula is defined across at least the entireties of the X width and Y height dimensions of the board.